

## AMENDMENTS

### **Amendments to the Claims**

Please amend the claims as follows:

1. (Currently Amended) An apparatus having a logic unit for defining a metadata schema to facilitate passing data between an eXtensible Markup Language (XML) document and a hierarchical database, the apparatus comprising:
  - a database accessor configured to access a database schema indicative of database field names and a hierarchical structure for a hierarchical database;
  - a document accessor configured to access a document schema that defines the hierarchical structure, content data syntax, and semantics of valid, well-formed, XML documents that can be passed into and out of the hierarchical database, the document schema including an XML element name that maps to a database field name in the database schema; and
  - an association module configured to ~~associate~~ relate the database schema and the document schema to provide a metadata schema that enables data to be passed between an XML document and the hierarchical database, the database schema comprising a database field type identifier and the document schema comprising an XML element data type identifier that maps to the database field type identifier to facilitate converting content data between the XML element data type and the database field type based on the database field type identifier and the XML element data type identifier.

2. (Original) The apparatus of claim 1, wherein the document schema comprises an XML schema that complies with an industry standard for XML schemas.
3. (Original) The apparatus of claim 2, wherein the industry standard for XML schemas comprises version 1.0 as set forth by the World Wide Web Consortium.
4. (Original) The apparatus of claim 1, wherein the database schema comprises a predefined database schema comprising a set of java classes representative of one or more nodes and one or more fields of the hierarchical database.
5. (Canceled).
6. (Original) The apparatus of claim 1, wherein the document schema comprises at least one directive metadata element configured to not interfere with third-party applications using the document schema and to facilitate passing data between the XML document and the hierarchical database.
7. (Original) The apparatus of claim 6, wherein the at least one directive metadata element is selected from the group of directives consisting of a storage and retrieval directive, an index directive, and a hierarchical database indicator directive.
8. (Original) The apparatus of claim 1, wherein the hierarchical database comprises an Information Management System (IMS) database.

9. (Currently Amended) A computer-programmed method for defining a metadata schema to facilitate passing data between an eXtensible Markup Language (XML) document and a hierarchical database, the computer-programmed method comprising:
- accessing a database schema indicative of database field names and a hierarchical structure for a hierarchical database;
  - accessing a document schema that defines the hierarchical structure, content data syntax, and semantics of valid, well-formed, XML documents that can be passed into and out of the hierarchical database, the document schema including an XML element name that maps to a database field name in the database schema; and
  - ~~associating~~ relating the database schema and the document schema to provide a metadata schema that enables data to be passed between an XML document and the hierarchical database, the database schema comprising a database field type identifier and the document schema comprising an XML element data type identifier that maps to the database field type identifier to facilitate converting content data between the XML element data type and the database field type based on the database field type identifier and the XML element data type identifier.

10. (Currently Amended) The computer-programmed method of claim 9, wherein the document schema comprises an XML schema that complies with an industry standard for XML schemas.
11. (Currently Amended) The ~~article of manufacture~~ computer-programmed method of claim 10, wherein the industry standard for XML schemas comprises version 1.0 as set forth by the World Wide Web Consortium.
12. (Currently Amended) The computer-programmed method of claim 9, wherein the database schema comprises a predefined database schema comprising a set of java classes representative of one or more nodes and one or more fields of the hierarchical database.
13. (Canceled).
14. (Currently Amended) The computer-programmed method of claim 9, wherein the document schema comprises at least one directive metadata element configured to not interfere with third-party applications using the document schema and to facilitate passing data between the XML document and the hierarchical database.
15. (Currently Amended) The computer-programmed method of claim 9, wherein the at least one directive metadata element is selected from the group of directives consisting of a storage and retrieval directive, an index directive, and a hierarchical database indicator directive.

16. (Currently Amended) The computer-programmed method of claim 9, wherein the hierarchical database comprises an Information Management System (IMS) database.
17. (Currently Amended) An article of manufacture comprising a program storage medium readable by a processor and embodying one or more instructions executable by a processor to perform a method for defining a metadata schema to facilitate passing data between an eXtensible Markup Language (XML) document and a hierarchical database, the method comprising:
- accessing a database schema indicative of database field names and a hierarchical structure for a hierarchical database;
  - accessing a document schema that defines the hierarchical structure, content data syntax, and semantics of valid, well-formed, XML documents that can be passed into and out of the hierarchical database, the document schema including an XML element name that maps to a database field name in the database schema; and
  - ~~coupling~~ relating the database schema and the document schema to provide a metadata schema that enables data to be passed between an XML document and the hierarchical database, the database schema comprising a database field type identifier and the document schema comprising an XML element data type identifier that maps to the database field type identifier to facilitate converting content data between the XML element data type and

the database field type based on the database field type identifier  
and the XML element data type identifier.

18. (Original) The article of manufacture of claim 17, wherein the document schema comprises an XML schema that complies with an industry standard for XML schemas.
19. (Original) The article of manufacture of claim 18, wherein the industry standard for XML schemas comprises version 1.0 as set forth by the World Wide Web Consortium.
20. (Original) The article of manufacture of claim 17, wherein the database schema comprises a predefined database schema comprising a set of java classes representative of one or more nodes and one or more fields of the hierarchical database.